



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,195	08/20/2003	Yasuyoshi Hyodo	ASMJP.137AUS	6076
20995	7590	03/28/2006	EXAMINER	
KNOBBE MARTENS OLSON & BEAR LLP			BLUM, DAVID S	
2040 MAIN STREET			ART UNIT	
FOURTEENTH FLOOR			PAPER NUMBER	
IRVINE, CA 92614			2813	

DATE MAILED: 03/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/644,195

Applicant(s)

HYODO ET AL.

Examiner

David S. Blum

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) 3-6, 11, 12, 14, 15 and 17-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 7-10, 13 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-24 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/14/05; 8/20/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2813

This is in response to the election filed 12/12/05

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of claims 1-2, 7-10, 13, and 16 in the paper filed 12/12/05 is acknowledged.

Claims 3-6, 11-12, 14-15, and 17-24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species and/or invention, there being no allowable generic or linking claim. Election was made **without** traverse in the paper filed 12/12/05.

The applicant does argue that the Markush groups of claims 2, 8, 10, and 13, are few in number and are closely related, so that a search and examination could be made without serious burden. However, the number of permutations (size of the groups) is significantly large and that would present a serious burden, that they are closely related is of no consequence (the applicant did not state that they are all obvious variants), and despite the argument, the election has not been traversed.

Claim Objections

Claim 2 is objected to because of the following informalities: Claim 2 recites $S9(n)O(n)R(2n)$. the examiner believes S9 should be Si. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 7-10, and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Li (US2004/0137757).

Li teaches all of the positive steps of claims 1-2, 7-10, and 13 as follows.

Regarding claim 1, Li forms an insulation film by introducing a gas comprising a source gas comprising a silicon-containing hydrocarbon containing at least one vinyl group and an additive gas (paragraph 0009, 0012, 0015, 0030, and 0031).

Regarding claim 2, the Si-vinyl could be cyclic (paragraph 0009) having the formula $\text{Si}(n)\text{O}(n)\text{R}(2n)$ (paragraph 0012).

Regarding claim 7, the source gas includes a hydrocarbon compound containing no vinyl group (paragraph 0019, the gas includes one or more cyclic and one or more non-cyclic compounds. See paragraphs 0012 and 0013 for possible combinations.).

Art Unit: 2813

Regarding claim 8, the Si compound is selected from a group of linear compounds having the formula $\text{Si (a)O(a-b=2)(OR)}_2$ (see paragraph 0013).

Regarding claim 9, the Si-vinyl compound is in the range of 10-100% (paragraph 0019, 5-80% cyclic compound).

Regarding claim 10, the additive gas may be helium (paragraph 0030).

Regarding claim 13, the additive gas may be helium which is (inherently) an inert gas (paragraph 0030).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li (US2004/0137757).

Li teaches all of the positive steps of claim 16 as recited above in regard to claim 7, except for the measurement of the film stress.

Regarding claim 16, the dielectric constant is 2.54 which is of 3 or lower.

Regarding the film stress of 40 MPa or lower, Li is silent as to this property. However, as Li forms the film using the materials of the instant claims and by the same process, contrary evidence to the contrary, the examiner states that the same physical properties will result.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David S. Blum whose telephone number is (571)-272-1687) and e-mail address is David.blum@USPTO.gov .

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead Jr., can be reached at (571)-272-1702. Our facsimile number all patent correspondence to be entered into an application is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



David S. Blum

March 27, 2006